

Claim

We claim:

1.

1 A reciprocating floor conveyor slide bearing
2 comprising an elongated horizontal central base including
3 a base front end, a base rear end, a base left side, a
4 base right side, a plurality of crossbeam engaging
5 surfaces, a first floor slat upwardly facing bearing
6 surface, and a second floor slat upwardly facing bearing
7 surface;

8 a left side wall integral with the base left
9 side extending upward from the horizontal base and from
10 the base front end to the base rear end;

11 a right side wall integral with the base right
12 side and extending upward from the horizontal base and
13 from the base front end to the base rear end;

14 a left wing integral with a left side top of
15 the left side wall, extending to the left of the left
16 side wall, having a guide beam engaging left wing bottom
17 surface and a left wing top bearing surface;

18 a right wing integral with a right side top of
19 the right side wall, extending to the right of the right
20 side wall, having a guide beam engaging right wing bottom
21 surface and a right wing top bearing surface; and

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22 wherein in the reciprocating floor conveyor
23 slide bearing extends from a first end of a floor
24 conveyor to a second end of the floor conveyor.

2.

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A reciprocating floor conveyor, slide bearing, as set forth in claim 1, including a left side wall upper finger that engages a first guide beam, a right side wall upper finger that engages a second guide beam, and wherein the left side wall upper finger and right side wall upper finger limit upward movement of the reciprocating floor conveyor slide bearing and close an opening between a first guide beam, a second guide beam, a conveyor front end and a conveyor rear end.

3.

1 A reciprocating floor conveyor, slide bearing,
2 as set forth in claim 1, wherein the reciprocating floor
3 conveyor slide bearing is an extruded plastic material.

4.

1 A reciprocating floor conveyor slide bearing,
2 as set forth in claim 1, wherein the reciprocating floor
3 conveyor slide bearing is an ultra high molecular weight
4 plastic.

5.

1 A reciprocating floor conveyor slide bearing,

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2 as set forth in claim 1, including;

3 a left side wall upper finger that cooperates
4 with the guide beam engaging left wing bottom surface to
5 form a left guide beam engaging slot that extends from
6 the base front end and to the base rear end; and

7 a right side wall upper finger that cooperates
8 with the guide beam engaging right wing bottom surface to
9 form a right guide beam engaging slot that extends from
10 the base front end to the base rear end.

6.

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A reciprocating floor conveyor slide bearing,
as set forth in claim 1, including:

a left lower finger extending laterally inward
from the left side wall and cooperating with the first
floor slat upwardly facing bearing surface to form a
first floor slat second bottom flange receiving lower
slot; and

a right lower finger extending laterally inward
from the right side wall and cooperating with the second
floor slat upwardly facing bearing surface to form a
second floor slat first bottom flange receiving lower
slot.

7.

A reciprocating floor conveyor slide bearing
comprising;

an elongated horizontal central base including
a base front end, a base rear end, a base left side, a
base right side, a plurality of cross beam engaging
bottom surfaces, a first floor slat upwardly facing
surface, and a second floor slat upwardly facing bearing
surface;

a left side wall integral with the base left
side extending upward from the horizontal base to a left
side wall top and from the base front end to the base

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rear end;

a right side wall integral with the base right side extending upward from the horizontal base to a right side wall top and from the base front end to the base rear end;

a left wing integral with the left side wall top, extending to the left of the left side wall, and having a guide beam engaging left wing bottom surface and a left wing top bearing surface;

a right wing integral with the right side wall top, extending to the right of the right side wall, and having a guide beam engaging right wing bottom surface and a right wing top bearing surface;

a left side wall upper finger that cooperates with the guide beam engaging left wing bottom surface to form a left guide beam engaging slot that extends from the base front end to the base rear end;

a right side wall upper finger that cooperates with the guide beam engaging right wing bottom surface to form a right guide beam engaging slot that extends from the base front end to the base rear end;

a left lower finger extending laterally inward from the left side wall and cooperating with the first

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floor slat upwardly facing bearing surface to form a first floor slat second bottom flange receiving lower slot; and

a right lower finger extending laterally inward from the right side wall and cooperating with the second floor slat upwardly facing bearing surface to form a second floor slat first bottom flange receiving lower slot.

8.

1 A reciprocating floor conveyor slide bearing,
2 as set forth in claim 7, wherein the left side wall upper
3 finger, the right side wall upper finger, the left lower
4 finger and the right lower finger extend from the base
5 front end to the base rear end.

9.

1 A reciprocating floor conveyor slide bearing,
2 as set forth in claim 7, wherein the reciprocating floor
3 conveyor slide bearing closes an opening between a first
4 guide beam, a second guide beam, a conveyor front end and
5 a conveyor rear end thereby preventing loss of cargo as
6 well as preventing cargo contamination due to the passage

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7 of cargo as well as contaminates through the opening.

10.

A reciprocating floor conveyor slide bearing, as set forth in claim 7, including a first slat connector slot in the left wing and a second slat connector slot in the right wing.

11.

1 A method of preventing cargo loss and
2 preventing cargo contamination in a cargo container with
3 a reciprocating slat floor conveyor having a plurality of
4 cross beams and a plurality of guide beams comprising:
5 inserting a slide bearing between a left guide
6 beam and a right guide beam with a bearing base sitting
7 on the plurality of cross beams and with a left bearing
8 wing in sealing contact with the left guide beam and a
9 right bearing wing in sealing contact with a right guide
10 beam;
11 locking the slide bearing in place to limit
12 vertical movement of the slide bearing relative to the
13 left guide beam and the right guide beam;
14 holding the left bearing wing and the right

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15 bearing wing of the slide bearing in sealing contact with
16 a left guide beam and a right guide beam by positioning
17 the first floor slat in sliding engagement with the left
18 bearing wing and a second floor slat in sliding
19 engagement with the right bearing wing; and
20 restraining the first floor slat and the second
21 floor slat from vertical movement relative to the left
22 guide beam and the right guide beam.